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2018 FORD EcoSport OEM Service and Repair Workshop Manual

[Go to manual page](#)

GO to [Q17](#)

No

GO to [Q12](#)

Q11 CONFIRM THE PASSENGER SEATBELT LOAD LIMITER FAULT

NOTE

Make sure all SRS (supplemental restraint system) components and the RCM (restraints control module) electrical connectors are connected before carrying out the self-test. If not, Diagnostic Trouble Codes (DTCs) are recorded.

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Prior to reconnecting any previously disconnected SRS (supplemental restraint system) component:
 - Inspect connector(s) (including any inline connectors) for pushed-out, loose or spread terminals and loose or frayed wire connections at terminals.
 - Inspect wiring harness for any damaged, pinched, cut or pierced wires.
 - Inspect RCM (restraints control module) C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.
 - Inspect the Passenger Seatbelt Load Limiter connector and make sure the Connector Position Assurance (CPA) tabs are not broken and the clip is not damaged.
 - Repair any concerns found.
Refer to Wiring Diagrams Cell 5 for schematic and connector information.
- Connect Passenger Seatbelt Load Limiter C303B (Regular Cab).
- Connect Passenger Seatbelt Load Limiter C3637B (SuperCrew Cab).
- Connect Passenger Seatbelt Load Limiter C827B (SuperCab).
- Repower the SRS (supplemental restraint system) .
Do not
prove out the SRS (supplemental restraint system) at this time.
REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Ignition ON.
- Using a diagnostic scan tool, carry out RCM (restraints control module) self-test.

Was the original DTC (diagnostic trouble code) retrieved on-demand during self-test?

- Connect Passenger Seatbelt Load Limiter C3637B (SuperCrew Cab).
- Connect Passenger Seatbelt Load Limiter C827B (SuperCab).
- Connect RCM (restraints control module) C310A and C310B (if previously disconnected).
- Repower the SRS (supplemental restraint system) .

Do not

prove out the SRS (supplemental restraint system) at this time.

REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).

- Ignition ON.
- Using a diagnostic scan tool, carry out RCM (restraints control module) self-test.

Was the original DTC (diagnostic trouble code) retrieved on-demand during self-test?

<p>Yes</p>	<p>CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new RCM (restraints control module) .</p> <p>REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).</p> <p>GO to Q17</p>
<p>No</p>	<p>In the process of diagnosing the fault, the fault condition has become intermittent. Do not install any new SRS (supplemental restraint system) components at this time. Install SRS (supplemental restraint system) components only when directed to do so in the pinpoint test.</p> <p>For DTC (diagnostic trouble code) B0082:13 or B0082:1A, GO to Q13 For DTC (diagnostic trouble code) B0082:11, GO to Q14 For DTC (diagnostic trouble code) B0082:12, GO to Q15</p>

Q13 CHECK THE PASSENGER SEATBELT LOAD LIMITER DEPLOYMENT CONTROL (DEPLOY_26_R) PID (PARAMETER IDENTIFICATION) FOR AN INTERMITTENT LOW RESISTANCE OR OPEN CIRCUIT FAULT

- Using the diagnostic scan tool,
Access the RCM (restraints control module) and monitor the DEPLOY_26_R (Passenger Seatbelt Load Limiter Deployment Control) (mOhm) PID (parameter identification)
- While monitoring the PID (parameter identification) , attempt to recreate the fault by wiggling connectors (including any inline connectors) and flexing the wiring harness frequently.

Does the PID (parameter identification) value stay between 1.7 and 2.98 ohms?

- Disconnect Passenger Seatbelt Load Limiter C3637B (SuperCrew Cab).
- Disconnect Passenger Seatbelt Load Limiter C827B (SuperCab).
- Repower the SRS (supplemental restraint system) .

Do not

prove out the SRS (supplemental restraint system) at this time.

REFER to: [Supplemental Restraint System \(SRS\) Repowering](#)(501-20B Supplemental Restraint System, General Procedures).

- Ignition ON.
- Attempt to recreate the fault by wiggling connectors (including any inline connectors) and flexing the wiring harness frequently.
- Using a diagnostic scan tool, carry out RCM (restraints control module) self-test.

Was DTC (diagnostic trouble code) B0082:12 retrieved on-demand during self-test?

Yes	<p>DEPOWER the SRS (supplemental restraint system) and REPAIR as necessary. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to Q17</p>
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No	<p>The fault is not present and cannot be recreated at this time. Do not install any new SRS (supplemental restraint system) components at this time. Install SRS (supplemental restraint system) components only when directed to do so in the pinpoint test. GO to Q16</p>
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Q16 CHECK THE HARNESS AND CONNECTORS

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect Passenger Seatbelt Load Limiter C303B (Regular Cab).
- Disconnect Passenger Seatbelt Load Limiter C3637B (SuperCrew Cab).
- Disconnect Passenger Seatbelt Load Limiter C827B (SuperCab).
- Inspect:
 - Inspect connector(s) (including any inline connectors) for corrosion, loose or spread terminals and loose or frayed wire connections at terminals.
 - Inspect wiring harness for any damage, pinched, cut or pierced wires.
 - Inspect RCM (restraints control module) C310A and C310B Connector Position Assurance (CPA) lever/lock for correct operation.

Yes	Do not clear any Diagnostic Trouble Codes (DTCs) until all Diagnostic Trouble Codes (DTCs) have been resolved. DIAGNOSE and REPAIR the SRS (supplemental restraint system) Diagnostic Trouble Codes (DTCs). REFER to the DTC (diagnostic trouble code) Chart in this section.
No	The repair is complete. RETURN the vehicle to the customer.

PINPOINT TEST R : B00A0:09, B00A0:63, B00A0:64, B00A0:68

Refer to Wiring Diagrams Cell 46 for schematic and connector information.

Normal Operation and Fault Conditions REFER to: [Airbag and Seatbelt Pretensioner Supplemental Restraint System \(SRS\) - System Operation and Component Description](#) (501-20B Supplemental Restraint System, Description and Operation).

The RCM (restraints control module) is in constant communication with various control modules on the HS-CAN (high-speed controller area network) . One of those modules is the OCSM (occupant classification system module) . The RCM (restraints control module) continuously monitors the HS-CAN (high-speed controller area network) for fault messages reported by the OCSM (occupant classification system module) . The RCM (restraints control module) also checks for the correct identification of the OCSM (occupant classification system module) . If the RCM (restraints control module) receives fault message(s) from the OCSM (occupant classification system module) , it stores DTC (diagnostic trouble code) B00A0:09, B00A0:4A, B00A0:63, B00A0:64 or B00A0:68 in memory and sends a message to the IPC (instrument panel cluster) to illuminate the airbag warning indicator. **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
RCM (restraints control module) B00A0:09	Occupant Classification System: Component Failures	A fault is indicated when the RCM (restraints control module) receives a message from the OCSM (occupant classification system module) that a fault exists within the OCS (occupant classification system) .
RCM (restraints control module) B00A0:63	Occupant Classification System: Circuit/Component Protection Time-Out	A fault is indicated when the RCM (restraints control module) receives 8 or more invalid states from the OCSM (occupant classification system module) .
RCM (restraints control module)	Occupant Classification System: Signal Plausibility	A fault is indicated when the RCM (restraints control module) receives messages containing upper or lower

NOTE

Install new components only when directed to do so in the pinpoint test.

NOTE

Always make sure the correct SRS (supplemental restraint system) component is being installed. Parts released for other vehicles may not be compatible even if they appear physically similar. Check the part number listed in the Ford parts catalog to make sure the correct component is being installed. If an incorrect SRS (supplemental restraint system) component is installed, Diagnostic Trouble Codes (DTCs) may set.

NOTE

The SRS (supplemental restraint system) must be fully operational and free of faults before releasing the vehicle to the customer.

R1 RETRIEVE RCM (RESTRAINTS CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

• WARNING

Before beginning any service procedure in this section, refer to Safety Warnings in section 100-00 General Information. Failure to follow this instruction may result in serious personal injury.

- Ignition ON.
- Using a diagnostic scan tool, perform RCM (restraints control module) self-test.

Was DTC (diagnostic trouble code) B00A0:09, B00A0:4A, B00A0:63, B00A0:64 or B00A0:68 retrieved on-demand during self-test?

Yes

This fault cannot be cleared until it is corrected and the DTC (diagnostic trouble code) is no longer retrieved on-demand during self-test.

For DTC (diagnostic trouble code)

B00A0:09, B00A0:63 or B00A0:68, RETRIEVE Diagnostic Trouble Codes (DTCs) from the OCSM (occupant classification system module)

and DIAGNOSE those Diagnostic Trouble Codes (DTCs). REFER to the OCSM (occupant classification system module)

DTC (diagnostic trouble code)

Yes	GO to R4
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No	<p>INSTALL the correct RCM (restraints control module) .</p> <p>REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).</p> <p>GO to R5</p>
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R4 VERIFY THE RCM (RESTRAINTS CONTROL MODULE) CONFIGURATION

- Carry out PMI (programmable module installation) for the RCM (restraints control module) . Manually enter As-Built data. Refer to the diagnostic scan tool instructions when carrying out PMI (programmable module installation) .
- Using a diagnostic scan tool, perform RCM (restraints control module) self-test.

Was DTC (diagnostic trouble code) **B00A0:4A** retrieved on-demand during self-test?

Yes	<p>CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new RCM (restraints control module) .</p> <p>REFER to: Restraints Control Module (RCM) (501-20B Supplemental Restraint System, Removal and Installation).</p> <p>GO to R5</p>
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No	The fault is corrected. GO to R5
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R5 CHECK FOR ADDITIONAL SRS (SUPPLEMENTAL RESTRAINT SYSTEM) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition OFF.
- Ignition ON.

- **NOTE**

When selecting Restraints from the Self Test menu, DTCs are retrieved from the RCM (restraints

B00B5:11	Short To Ground	position sensor circuit for more than 6 seconds.
RCM (restraints control module) B00B5:12	Driver Seat Track Position Restraints Sensor: Circuit Short To Battery	A fault is indicated when the RCM (restraints control module) senses a short to voltage on the driver seat position sensor circuit for more than 6 seconds.
RCM (restraints control module) B00B5:13	Driver Seat Track Position Restraints Sensor: Circuit Open	A fault is indicated when the RCM (restraints control module) senses an open on either driver seat position sensor circuit for more than 6 seconds.
RCM (restraints control module) B00B5:1D	Driver Seat Track Position Restraints Sensor: Circuit Current Out Of Range	A fault is indicated when the RCM (restraints control module) measures current outside of an acceptable range on the driver seat position sensor circuit for more than 6 seconds.

Possible Sources

- Wiring, terminals or connectors
- Driver seat position sensor
- RCM (restraints control module)

Visual Inspection and Pre-checks

- Inspect for damaged wiring harness(es)
- Inspect for loose or damaged connectors

WARNING

Incorrect repair techniques or actions can cause an accidental Supplemental Restraint System (SRS) deployment. Never compromise or depart from these instructions. Failure to precisely follow all instructions could result in serious personal injury from an accidental deployment.

NOTICE

Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may cause damage to the connector.

NOTE

Most faults are due to connector and/or wiring concerns. Carry out a thorough inspection and

Yes	<p>This fault cannot be cleared until it is corrected and the DTC (diagnostic trouble code) is no longer retrieved on-demand during self-test.</p> <p>For DTC (diagnostic trouble code) B00B5:11 or B00B5:1D, GO to S2 For DTC (diagnostic trouble code) B00B5:12, GO to S4 For DTC (diagnostic trouble code) B00B5:13, GO to S5</p>
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No	<p>This is an intermittent fault when present as a CMDTC (continuous memory diagnostic trouble code) only. GO to S10</p>
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S2 CHECK THE DRIVER SEAT POSITION SENSOR DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (SHORT TO GROUND OR CURRENT OUT OF RANGE INDICATED)

NOTE

This pinpoint test step attempts to change the fault reported by the RCM (restraints control module) by inducing a different fault condition. If the reported fault changes, this indicates the RCM (restraints control module) is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Disconnect Driver Seat Position Sensor C356 .
- Ignition ON.
- Using a diagnostic scan tool, perform RCM (restraints control module) self-test.

• **DIAGNOSTIC TIP:**

When viewing Diagnostic Trouble Codes (DTCs) with the driver seat position sensor disconnected, an open circuit fault is normally retrieved.

Did the on-demand DTC (diagnostic trouble code) change from B00B5:11 or B00B5:1D to B00B5:13?

Yes	GO to S8
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No	<p>For DTC (diagnostic trouble code) B00B5:11, GO to S3 For DTC (diagnostic trouble code) B00B5:1D, GO to S9</p>
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S3 CHECK THE DRIVER SEAT POSITION SENSOR CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .

C356-2		Ground
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Is any voltage present?

Yes	REPAIR the circuit. Refer to Wiring Diagrams Cell 5 for schematic and connector information. GO to S11
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No	GO to S9
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S5 CHECK THE DRIVER SEAT POSITION SENSOR DTC (DIAGNOSTIC TROUBLE CODE) FOR A FAULT STATUS CHANGE (OPEN INDICATED)

NOTE

This pinpoint test step attempts to change the fault reported by the RCM (restraints control module) by inducing a different fault condition. If the reported fault changes, this indicates the RCM (restraints control module) is functioning correctly and is not the source of the fault.

- Ignition OFF.
- Depower the SRS (supplemental restraint system) .
REFER to: [Supplemental Restraint System \(SRS\) Depowering](#)(501-20B Supplemental Restraint System, General Procedures).
- Disconnect Driver Side Airbag (Inline) C3051 .
- Disconnect Driver Seat Position Sensor C356 .
- Connect a fused jumper wire:

Lead 1	Measurement / Action	Lead 2
C356-1		C356-2

- Repower the SRS (supplemental restraint system) . Do not prove out the SRS (supplemental restraint system) at this time.